

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 June 2004 (24.06.2004)

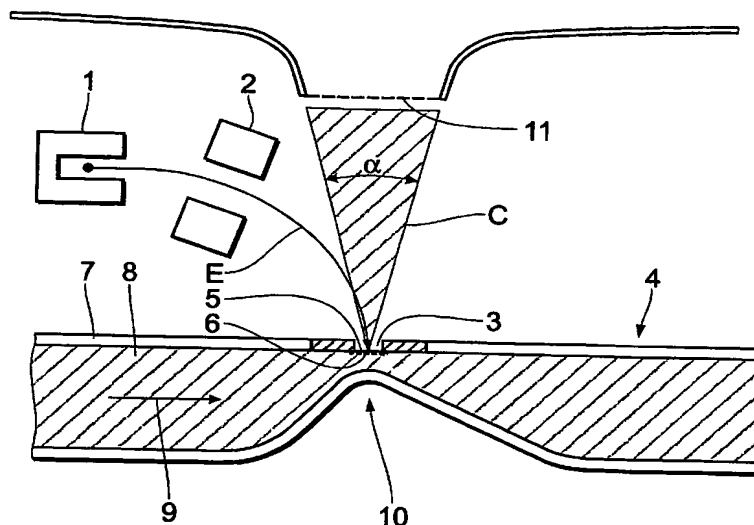
PCT

(10) International Publication Number
WO 2004/053919 A2

- (51) International Patent Classification⁷: **H01J 35/08**
- (21) International Application Number:
PCT/IB2003/005649
- (22) International Filing Date: 3 December 2003 (03.12.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
02080248.4 11 December 2002 (11.12.2002) EP
03103685.8 6 October 2003 (06.10.2003) EP
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hoven (NL).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR,
CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU,
SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,

[Continued on next page]

(54) Title: X-RAY SOURCE FOR GENERATING MONOCHROMATIC X-RAYS



(57) Abstract: The present invention relates to an X-ray source comprising an electron source (1) for the emission of electrons (E), a target (4) for the emission of characteristic, substantially monochromatic X-rays (C) in response to the incidence of the electrons (E) and an outcoupling means (11) for outcoupling of the X-rays. To achieve characteristic, substantially monochromatic X-rays with a high power loadability electrons are incident on a metal foil (5) of a thickness of less than 10 μm and a base arrangement (7, 12) is arranged wherein the metal of said metal foil (5) has a high atomic number allowing the generation of X-rays (C) and the material substantially included in the base arrangement (7, 12) has a low atomic number not allowing the generation of X-rays (C). The outcoupling means are adapted for outcoupling only X-rays (C) on the side of the metal foil (5) on which the electrons (E) are incident and which is opposite to the side of the base arrangement (7, 12) since on this side almost no bremsstrahlung radiation is generated.



SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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